DOCUMENT RESUME

ED 286 925 TM 870 566

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TITLE Interest Inventory Interpretation: Some Suggestions and Cautions.
PUB DATE Apr 87
NOTE 11p.; Paper presented at the Annual Meeting of the American Association for Counseling and Development (New Orleans, LA, April 21-25, 1987).
PUB TYPE Speeches/Conference Papers (150) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Ability Identification; *Interest Inventories; Interrater Reliability; Job Satisfaction; Norm Referenced Tests; *Occupational Tests; Personality Assessment; Personality Measures; Profiles; *Self Evaluation (Individuals); Testing Problems; *Test Interpretation; Test Manuals; Test Reviews; Test Validity; *Vocational Interests
IDENTIFIERS Iachon Index of Agreement; *Self Directed Search; *Strong Campbell Interest Inventory

ABSTRACT

This paper offers some suggestions and cautions concerning the use of the Self-Directed Search (SDS) and the Strong-Campbell Interest Inventory (SCII). A rationale for separate scoring of interest and ability sections of the SDS is provided, i.e., that correlations between interest and abilities and between abilities and vocational satisfaction are very low, but correlation between interests and vocational satisfaction is high. Research results in support of separate scoring, including the Iachon index of agreement, are presented. Implications and suggestions for the interpretation of separate interest and ability profiles for the SDS are included. Supplementary instructions for administration and a supplementary scoring sheet are attached. A discussion of possible distortions in SCII profiles due to the use of normed scores is provided. Research results which illustrate actual cases of distortion are presented. Instructions for the calculation of transformed SCII profiles in cases of suspected distortion are provided. Research results in support of the validity of transformed SCII profiles are included. (Author/JGL)

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Interest Inventory Interpretation: Some Suggestions and Cautions

1987 AACD Convention, New Orleans, April 22, 1987

Jim M. Morrow, Western Carolina University

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A rationale for separate scoring of interest and ability sections of the SDS is provided. Research results in support of separate scoring are presented. Implications and suggestions for the interpretation of separate interest and ability profiles for the SDS are included. Supplementary instructions for administration and a supplementary scoring sheet are attached.

A discussion of possible distortions in SCII profiles due to the use of normed scores is provided. Research results which illustrate actual cases of distortion are presented. Instructions for the calculation of transformed SCII profiles in cases of suspected distortion are provided. Research results in support of the validity of transformed SCII profiles are included.

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Interest Inventory Interpretation: Some Suggestions and Cautions

1987 AACD Convention, New Orleans, April 22, 1987

Jim M. Morrow, Western Carolina University

I. The Self-Directed Search (SDS)

A. Rationale for separate scoring of interest sections (Activities and Occupations) and ability sections (Competencies and Self-Estimates) of the SDS

1. Relationship between interests and abilities -

A number of studies of the nature of the relationship between independent measures of interests (interest inventories) and abilities (aptitude and intelligence tests) indicate low, positive correlations in general between the two. Correlation coefficients typically fall in the .10's and .20's, and rarely exceed .30.

2. Relationship between abilities and vocational satisfaction/success -

A number of studies of the nature of the relationship between abilities (verbal, numerical, spatial, perceptual, and motor) and vocational satisfaction/success indicate low correlations, with about as many negative as positive, and clustering near zero. These are independent studies of ability and vocational satisfaction/success in which interests are not considered.

3. Relationship between interests and vocational satisfaction/success -

Studies of the nature of the relationship between interests and vocational satisfaction/success can be summarized as follows:

a. You are about twice as likely to be satisfied with your occupation if your interests are appropriate for it than if they are not.
b. You are about three times as likely to be dissatisfied with your occupation if your interests are not appropriate for it than if they are.
c. You are about half again as likely to be undecided about job satisfaction if your interests are not appropriate for your occupation than if they are.

B. Comparison of interest and ability sections of the SDS

1. Correlations between interest and ability sections of the SDS are higher than those between independent measures of interests and abilities due to item analysis procedures used to insure an internally consistent test. They range from about .30 to .60. Since these are only moderate correlations, it is worthwhile to consider interests and abilities separately.

2. Validity of SDS summary, interest, and ability profiles -

In a study to determine the validity of SDS summary, interest, and ability profiles, 53 individuals (graduate students in counseling, 40 women and 13 men) were asked to determine their "true" Holland personality type profiles. They studied written descriptions of the six personality types, took part in discussions regarding the types and Holland's theory in general, took the Vocational Preference Inventory, and asked one or two others who knew them well to read the descriptions and perform independent rankings of their (the students) resemblance to

the types. Following these activities, the students rank-ordered themselves in terms of their own perceptions of their resemblance to the six personality types. These self-ranked profiles were accepted as valid and were compared to SDS summary, interest, and ability profiles resulting from an administration of the SDS approximately eight weeks following the self-rankings. The students also took the Strong-Campbell Interest Inventory (SCII) at the time they took the SDS.

Table 1 shows group self-ranked profiles, group SDS summary, interest, and ability profiles, and Iachon index of agreement ratings (see attached information regarding the Iachon index) between group self-ranked profiles and SDS summary, interest, and ability profiles. Mean Iachon index of agreement ratings between individual self-ranked and SDS summary, interest, and ability profiles are also shown, with separate agreement ratings for women and men provided. Group SCII profiles and Iachon index of agreement ratings between self-ranked profiles and group and individual SCII profiles are provided for later reference.

TABLE 1

Comparisons Between Group and Individual SDS and SCII Profiles

	Iachon Index of Agreement Ratings Between Self-Ranked Profiles and SDS and SCII Profiles for:			
	Group	Individual Profiles (mean ratings)		
Group Profiles	Profiles	Combined Sex	Women	Men
Self-ranked - SAEICR				
SDS summary - SAEICR	28.00	23.75	23.67	24.31
SDS interest - SAEICR	28.00	22.70	22.53	23.23
SDS ability - SEICAR	24.00	21.46	21.55	21.20
SCII profile - SAEICR	28.00	22.08	21.60	23.58

Note. Underlining in SCII profile indicates tied ranks

C. Implications for scoring and interpreting the SDS

1. Lower agreement ratings for group and mean individual SDS ability profiles (in comparison to summary and interest profiles) warrants separate scoring for interest and ability sections, as provided on the attached SDS supplementary scoring sheet.

2. Lower mean agreement ratings for individual SDS profiles in general (in comparison to group profiles) suggests that individual attention is warranted to maximize the validity of the SDS.

3. During interpretation, the agreement (congruency) between SDS summary and interest profiles and current aspiration (occupational daydream) should, in many cases, be given more attention than the agreement between ability profile and current aspiration.

4. It is helpful to have individuals read descriptions of Holland's personality types and perform a self-ranking (and to ask someone who knows them well to rank them also) following the administration of the SDS and prior to its interpretation.

II. The Strong-Campbell Interest Inventory (SCII)

A. Normed versus raw score interest inventory profiles based on Holland's personality types

1. Holland's SDS relies upon raw scores rather than normed scores in producing its profile. Other inventories which utilize Holland's theoretical formulations for personality types and environmental (occupational) models, such as the SCII, rely on normed scores in producing their profiles. Cronbach, in the fourth edition of Essentials of Psychological Testing, supports the use of raw scores in the interpretation of interest inventories.

2. Holland's personality types are not evenly distributed across the population. Some types are relatively uncommon, while others are fairly common. Raw scores clearly reflect this uneven distribution. Norming of raw scores results in inflation of values of items in scales measuring the less common types and deflation of values of items in scales measuring the more common types. This results in an apparently more even distribution of types across the population than actually exists and tends to produce less differentiated or more flattened profiles. My experience of several years in using the SCII has led me to believe that the normed scores on both General Themes and Occupational scales in some cases result in distortions which don't make sense, intuitively, in terms of my understanding of Holland's personality types and environmental models and my experience with his own instruments over the past fifteen years.

3. Comparisons of the individual and group profiles of 16 individuals who were administered the SDS and the SCII are shown in Table 2 in columns a and b. Based on the results of the study reported in Table 1, the SDS profiles are presumed to be the more valid representations of the individuals' resemblance to Holland's personality types. Column ab in Table 2 shows the Iachon index of agreement ratings between individual and group SDS profiles and their respective SCII individual and group profiles. Individual profile agreement ratings vary considerably and the mean individual profile agreement rating is lower than the group profile agreement rating. The lack of greater agreement between individual SCII profiles and SDS profiles may result from distortion introduced by the norming of scores in the SCII.

In an attempt to remove the possible distortion introduced by the norming process, transformed SCII profiles were produced for the 16 individuals. This procedure is explained in the last section of this paper. Column c in Table 2 shows the transformed SCII profiles and column ac shows the Iachon index of agreement ratings between SDS profiles and transformed SCII profiles. As is evident in column ac, transformed SCII profiles are in high agreement with SDS profiles.

Another perspective of comparisons between SDS, SCII, and transformed SCII group profiles is provided by Figures 1, 2, and 3. The SCII profile in Figure 2 is clearly flatter and less differentiated that the SDS and transformed SCII profiles in Figure 1 and 3, respectively. The loss of differentiation resulting from the norming of scores appears to make individual SCII profiles susceptible to distortion that reduces the validity of profiles in some cases.

TABLE 2

Individual and Group Profiles and Agreement Ratings
for SDS, SCII, and Transformed SCII Profiles

Individual Profiles	a SDS	b SCII	ab Agree. Rating	c TSCII	ac Agree. Rating
1.	SEAIRC	SEAIRC	28.0	SAEIRC	26.0
2.	SEACIR	SIECAR	24.0	SAEIRC	27.0
3.	SIACER	SRIACE	24.0	SIAECR	28.0
4.	SAERIC	EASRIC	14.5	SAEIRC	28.0
5.	SIAECR	IEASRC	11.0	SIAREC	28.0
6.	SAERIC	ARSECI	9.9	SAIERC	26.0
7.	SEIACR	ICESAR	6.0	SEIACR	28.0
8.	SARIEC	RASIEC	13.0	SEAICR	24.0
9.	ESRCIA	ESACIR	27.0	ESRCIA	28.0
10.	ESRCIA	EACRIS	22.0	ESCRIA	27.0
11.	SEACRI	SERCIA	25.5	SEARIC	27.0
12.	SEAIRC	SEARIC	27.0	SEAICR	27.0
13.	ISERAC	IASERC	24.0	SIAREC	20.0
14.	SAIECR	ASIERC	21.0	SAEIRC	27.0
			mean = 19.8		mean = 26.5
Group Profiles	SEAIRC	SEAIRC	28.0	SEAIRC	28.0

Note. Underlining in profiles indicates tied ranks
a SDS profiles
b SCII profiles
c Transformed SCII profiles
ab Iachon index of agreement ratings between SDS and SCII profiles
ac Iachon index of agreement ratings between SDS and transformed SCII profiles

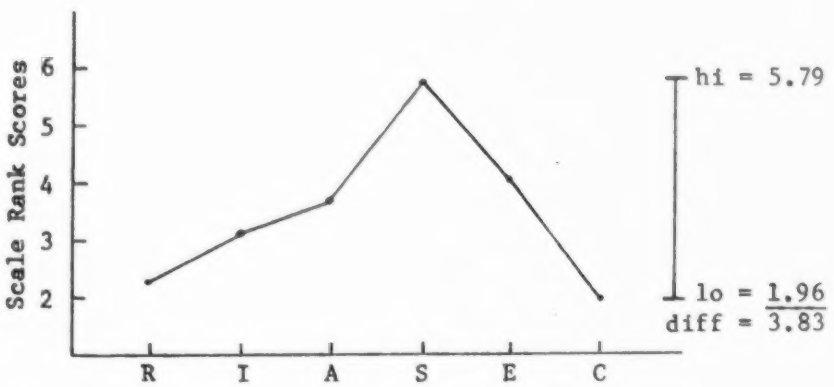

FIGURE 1

SDS Group Profile

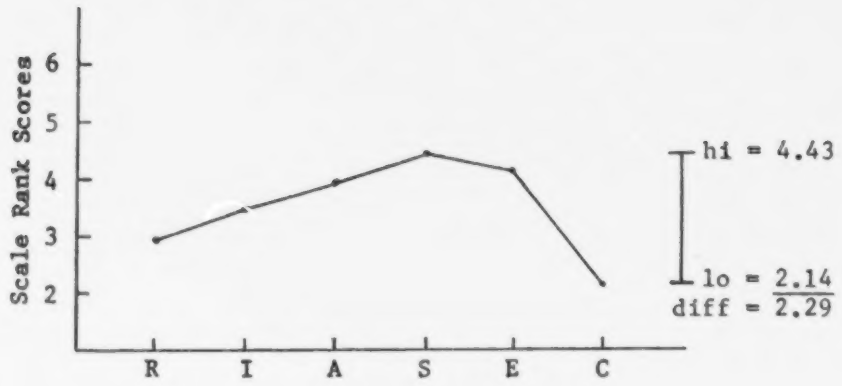

FIGURE 2
SCII Group Profile

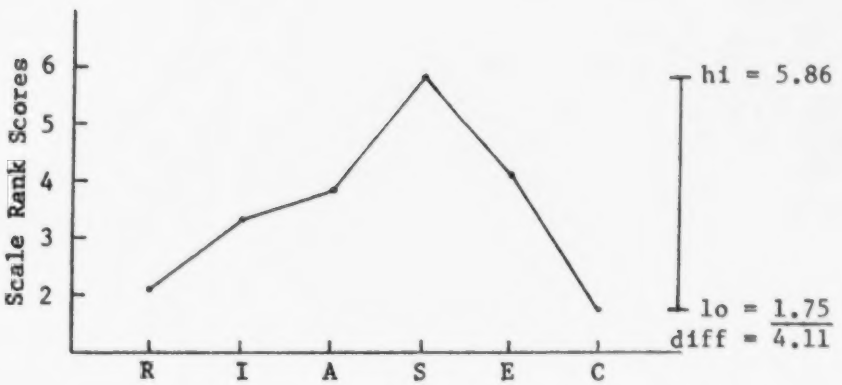

FIGURE 3
Transformed SCII Group Profile

B. Implications for interpreting the SCII

1. If clients question the appropriateness of their SCII General Themes (GT) profiles relative to the descriptions of the personality types provided with their SCII results, it might be helpful to calculate transformed SCII profiles to see if any changes produced by this procedure result in more meaningful profiles and greater understanding and acceptance by clients.

2. If clients express interest in identifying potentially appropriate occupations in addition to those indicated by their higher scores on the SCII occupational scales and if there is any question about the appropriateness of their SCII GT profiles, it again might be helpful to calculate

transformed SCII profiles. The transformed profiles can then be used to access additional occupations related to these profiles in the Dictionary of Holland Occupational Codes (DHOC) or in the SDS Occupations Finder (OF)

3. To calculate transformed SCII profiles based on Holland's codes for the six highest SCII occupational scale score occupations:

   a. Use the DHOC or OF to locate Holland's codes for the six highest SCII occupational scale score occupations.

   b. Draw a 3 x 6 matrix (3 across, 6 down, as in the example below).

   c. List weights of 3, 2, and 1 across the top of the matrix for first, second, and third place letters in the occupations' codes.

   d. List Holland's personality type letters (RIASEC) down the left side of the matrix.

   e. Place a tally mark in the matrix to indicate how many times each letter falls in first (3 points), second (2 points), and third (1 point) place.

   f. Multiply the number of tally marks for each letter by its weight and then total the values for each letter.

   g. Arrange the letters in order of their values, highest value first, and so forth.

   h. The three highest scoring letters, in order, are the transformed SCII profile (or code).

	3	2	1	Totals
R				
I				
A				
S				
E				
C				

SUPPLEMENTARY INSTRUCTIONS FOR THE SELF-DIRECTED SEARCH

OCCUPATIONAL DAYDREAMS Section

This section is a history of your vocational aspirations. List your current aspiration first. This should be the occupation you presently hope to attain. Then list your earlier aspirations, in order, back to the earliest one you can recall. Indicate, as best as you can remember, your age at the time you held each aspiration. Use the space in the margin to the left of each aspiration to record your age. Keep in mind that this is a history of your aspirations, not a listing of jobs you have held, unless some of these jobs were earlier aspirations.

ACTIVITIES Section

This section deals with things you like to do or think you would like to do. It deals with interests, not abilities. You should check the "L" column for any activity which interests you, whether or not you feel you are or would be competent at it.

COMPETENCIES Section

This section deals with things you feel you can do as well as or better than the average person. Unlike the previous section, this one deals with your abilities, not your interests. You should check the "Y" column for any activity you feel you can do well or competently, whether or not you find it interesting.

OCCUPATIONS Section

This section deals with the kinds of occupations you find interesting or appealing. You should check the "Y" column for any occupation you find genuinely interesting or appealing, even though you might not seriously consider it as a potential career.

SELF-ESTIMATES Section

There are two parts in this section. They deal with your best estimates of your abilities or characteristics in comparison with other persons your own age. Keep in mind that you are rating your abilities, not your interests. If you feel that you have high ability in a given area, rate it high, whether or not you find it interesting.

SDS SUPPLEMENTARY SCORING SHEET

		R	I	A	S	E	C
Interests:	Activities	____	____	____	____	____	____
	Occupations	____	____	____	____	____	____
	Interest Totals	____	____	____	____	____	____
	Interest Code		☐	☐	☐		
Abilities:	Competencies	____	____	____	____	____	____
	Self-Estimates	____	____	____	____	____	____
		____	____	____	____	____	____
	Ability Totals	____	____	____	____	____	____
	Ability Code		☐	☐	☐		
SDS Total Scores:		____	____	____	____	____	____
	Summary Code		☐	☐	☐		

Congruency: Summary Code/Current Daydream Hi MH Av ML Lo

Interest Code/Current Daydream Hi MH Av ML Lo

Ability Code/Current Daydream Hi MH Av ML Lo

*Iachon Measure of Agreement (Congruency/Compatibility) Between Holland Codes

Computation Procedures:

1. List the two codes to be compared in the spaces provided in the diagram below.

			Code 2			
			First Letter	Second Letter	Third Letter	
			_____	_____	_____	
Code 1	First Letter	_____	22( )	10( )	4( )	Row 1
	Second Letter	_____	10( )	5( )	2( )	Row 2
	Third Letter	_____	4( )	2( )	1( )	Row 3

2. Compare code 1 with code 2.
   a. If the first letter of code 1 matches any letter in code 2, place an X in the space provided beneath that letter in row 1.
   b. If the second letter of code 1 matches any letter in code 2, place an X in the space provided beneath that letter in row 2.
   c. If the third letter of code 1 matches any letter in code 2, place an X in the space provided beneath that letter in row 3.
3. Add the values of the spaces with X's in them. This sum is the measure of agreement (congruency/compatibility) between the two codes.

Interpretation:
- 25 - 28 = High congruency/compatibility
- 21 - 24 = Moderately high congruency/compatibility
- 9 - 20 = Average congruency/compatibility
- 4 - 8 = Moderately low congruency/compatibility
- 0 - 3 = Low congruency/compatibility

*Iachon, R. (1984). A measure of agreement for use with the Holland classification system. Journal of Vocational Behavior, 24, 133-141.